

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ERWIN M.J. PLATVOET  
and  
ROBERT J. GARTSIDE

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Appeal No. 2003-1066  
Application No. 09/841,277

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ON BRIEF

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Before KIMLIN, DELMENDO, and POTEATE, Administrative Patent Judges.

DELMENDO, Administrative Patent Judge.

DECISION ON APPEAL

This appeal is from the examiner's final rejection of claims 1-8 (final Office action mailed Apr. 19, 2002, paper 7) in the above-identified application.<sup>1</sup> Claim 9, which is the only

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<sup>1</sup> In reply to the final Office action, the appellants submitted an amendment pursuant to 37 CFR § 1.116 (2001) proposing a change to claim 6. (Amendment filed Oct. 8, 2002, paper 9.) This amendment has been entered for purposes of this appeal. (Advisory action mailed Oct. 18, 2002, paper 10.)

other pending claim, stands withdrawn from consideration by the examiner as being drawn to a non-elected invention.

### The Invention

The appellants claim a pyrolysis heater for the pyrolysis of hydrocarbons. Claim 1, which is the broadest claim on appeal, is illustrative:

1. A pyrolysis heater for the pyrolysis of hydrocarbons comprising:

a. a radiant heating zone having a bottom hearth, a lower portion adjacent to and extending upwardly from said hearth and an upper portion extending upwardly from said lower portion;

b. at least one tubular heating coil for processing said hydrocarbons located in said radiant heating zone and extending into both said upper portion and said lower portion;

c. a plurality of hearth burners located adjacent to said hearth directed upwardly for firing vertically up through said lower portion and into said upper portion; and

d. a plurality of base burners located on said hearth for firing in contact with said hearth thereby creating a heated radiating hearth surface.

### The References

In addition to the appellants' admitted prior art (specification, page 5 & Figure 1), the examiner relies on the following references as evidence of unpatentability:

Bauer et al.	4,342,642	Aug. 03, 1982
(Bauer)		

Butcher

5,409,375

Apr. 25, 1995

Ludwig Kniel, Olaf Winter, & Karl Stork (Kniel), Ethylene, Keystone to the Petrochemical Industry, in 2 Chemical Industries 128-34 (Marcel Dekker, Inc. 1979).

### The Rejections

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

- I. claims 1-4, 6, and 7 as unpatentable over either the appellants' admitted prior art or Bauer, each in view of Kniel; and
- II. claims 5 and 8 over the appellants' admitted prior art or Bauer, each in view of Kniel and Butcher.

### Discussion

We reverse the aforementioned rejections.

The examiner's characterizations (examiner's answer mailed Jan. 3, 2003, paper 12, page 4) of the teachings found in the admitted prior art and Bauer are undisputed. (Appeal brief filed Oct. 29, 2002, paper 11, pages 4-5.) Nevertheless, both the examiner and the appellants agree that neither the admitted prior art nor Bauer describes "a plurality of base burners located on said hearth for firing in contact with said hearth

thereby creating a heated radiating hearth surface" as recited in the appealed claims.<sup>2</sup> (Answer, page 4; appeal brief, page 5.)

To account for this difference, the examiner combines the teachings of the admitted prior art or Bauer with the teachings of Kniel. Specifically, the examiner held (answer, page 5):

It would have been obvious to one of ordinary skill in the art at the time appellant's [sic] invention was made to have provided flat horizontally firing burners in addition to the hearth burners on the hearth for creating a radiating hearth surface in appellant's [sic] admitted prior art or Bauer et al. in order to avoid flame impingement on the heating coil and produce a more uniform heating environment as taught by Kniel...

We disagree. The examiner's conclusion is based on Kniel's teachings (page 132) concerning "a uniformly radiating wall" (emphasis added). (Answer, page 4.) While the examiner argues (answer, page 7) that "it is easily construed by one of ordinary skill in the art that the term 'wall' can generally be accepted as any surface which is attached to the burner, including a horizontal surface," no evidence has been cited to support such an argument.

Contrary to the examiner's allegation, Kniel distinguishes wall burners from floor burners. In Kniel's Figure 36 (page

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<sup>2</sup> The present specification states that the "base burners" fire horizontally across the floor in order to heat the floor of the radiant heating zone so that the floor itself becomes a

129), the burners on the horizontal surface are clearly indicated as floor burners while the burners on the vertical surface are marked as wall burners. Because Kniel distinguishes wall burners from floor burners, Kniel's disclosure concerning "a uniformly radiating wall" is of no help in establishing the requisite motivation, teaching, or suggestion to provide the types of floor burners (i.e., base burners) as required by the appealed claims in the heaters of the admitted prior art or Bauer.

Butcher has been cited merely for its teaching with regard to "porous ceramic burners" as recited in appealed claims 5 and 6. Butcher therefore does not cure the deficiency in the examiner's basic combination of the admitted prior art or Bauer with Kniel.

For the above reasons, we conclude that the examiner has not carried the burden of establishing a prima facie case of obviousness within the meaning of 35 U.S.C. § 103. In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976).

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radiating surface. (Specification, p. 3, ll. 24-28; p. 6, ll. 17-22.)

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Decision

The rejections under 35 U.S.C. § 103(a) of appealed claims  
1-8 are reversed.

The decision of the examiner is reversed.

REVERSED

Edward C. Kimlin	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
Romulo H. Delmendo	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
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	)	
Linda R. Poteate	)	
Administrative Patent Judge	)	

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